In the Claims:

1. (original) A method of fabricating a semiconductor device by employing ion implantation to provide a semiconductor substrate (1) at a surface thereof with a region having dopant introduced therein, comprising the steps of: providing said semiconductor substrate (1) at a surface thereof with a mask layer including a polyimide resin film (2); and implanting dopant ions (5).

2. (original) A method of fabricating a semiconductor device by employing ion implantation to provide a semiconductor substrate (101) at a surface thereof with a region having dopant introduced therein, comprising the steps of: providing said semiconductor substrate (101) at a surface thereof with a mask layer (103) including a SiO_2 film (107a, 107b) and a thin metal film (105); and implanting dopant ions (5).

Claims **3 to 5** (canceled).

6. (original) The method of claim 1, wherein said semiconductor substrate (1) is heated to at least 300°C and dopant ions (5) are implanted.

7. (original) The method of claim 1, wherein said semiconductor substrate (1) is heated to at least 500°C and dopant ions (5) are implanted.

8. (original) The method of claim 1, wherein said polyimide resin film (2) is formed of photosensitive polyimide resin.

9. (original) The method of claim 1, wherein said polyimide resin film (2a) has a thickness of at least twice a depth of dopant introduced into said semiconductor substrate (1) at a region free of said polyimide resin film (2a).

10. (original) The method of claim 1, wherein a thin metal film is posed between said polyimide resin film (2a) and said semiconductor substrate (1).

11. (original) The method of claim 1, wherein a thin film formed of SiO_2 is posed between said polyimide resin film (2a) and said semiconductor substrate (1).

12. (original) The method of claim 2, wherein said semiconductor substrate (101) is heated to at least 300°C to 500°C and dopant ions are implanted.

13. (original) The method of claim 2, wherein said semiconductor substrate (101) is heated to at least 500°C to 800°C and dopant ions are implanted.

14. (original) The method of claim 2, wherein said mask layer (103) is formed of at least three layers.

15. (original) The method of claim 2, wherein said SiO_2 film (107a, 107b) and said thin metal film (105) each have an average thickness of 500 nm to 1.5 μm.

16. (original) The method of claim 2, wherein said mask layer (103) includes a SiO_2 film as a film corresponding to a bottommost layer.

17. (original) The method of claim 2, wherein said mask layer (103) includes a thin metal film as a film corresponding to a bottommost layer.

18. (original) The method of claim 2, wherein said mask layer (103) includes a SiO_2 film as a film corresponding to a topmost layer.

19. (original) The method of claim 2, wherein said mask layer (103) includes a thin metal film as a film corresponding to a topmost layer.

20. (original) The method of claim 2, wherein said SiO_2 film (107a, 107b) is formed by SOG.

[REMARKS FOLLOW ON NEXT PAGE]